Instructor:	Selim Sukhtaiev	**Time:**	TR 1:00-2:15
Office:	HBH 432	**Classroom:**	HBH 227
Email:	ss168@rice.edu	**Office Hours:**	Thursday 2:20-3:20 or by appointment

Many fundamental processes of the natural world are modeled by partial differential equations (PDEs), e.g., the vibrations of solids, the diffusion of chemicals, the interactions of photons and electrons, the spread of heat, and the flow of fluids. In addition to being a valuable tool in applied sciences, PDEs play a central role in theoretical mathematics, especially in differential geometry and analysis in general. The main goal of this class is to provide an introduction to the basic properties of PDEs, discuss their physical interpretation, and learn rigorous mathematical methods used in analysis of PDEs.

Textbooks: Lecture notes and course material are based on the following books:

- W. Strauss. Partial differential equations. An introduction. John Wiley & Sons, Inc., New York, 1992
- L. Evans. Partial differential equations. Second edition. Graduate Studies in Mathematics, 19. American Mathematical Society, Providence, RI, 2010

You are not required to purchase either of these books.

Homework: Written homework will be due weekly, usually at the beginning of class on Fridays. Homework will be assigned on Canvas and will consist of up to 10 problems. No late homework will be accepted, barring serious illness requiring hospitalization, or other major emergency. However, the *lowest-scoring homework assignment will be dropped*.

You are encouraged to discuss homework problems amongst each other. You are allowed to use the official textbook and notes from class, and you are allowed to use other sources to learn math, but not to specifically look for solutions of the homework problems. In particular, using any solution manual is prohibited. The use of calculators or mathematical software is prohibited unless explicitly specified.

Midterm Exams: There will be two midterm exams. Dates TBA.
Final exam: The date for the final exam is not available at this time. It is the policy of the Mathematics Department that no final may be given early to accommodate student travel plans. If you make travel plans that later turn out to conflict with the scheduled exam, then it is your responsibility to either reschedule your travel plans or take a zero in the final.

Make-up exams will be allowed only in the case of a documented medical emergency. If an exam conflicts with a holiday you observe, please let me know before the end of the first week of classes.
Grades: 20% Homework, 25% Midterm I, 25% Midterm II, 30% Final.

Expectations: I expect you to attend every class and to arrive on time. It is your responsibility to keep informed of any announcements, syllabus adjustments, or policy changes made during scheduled classes. Not all announcements will be posted on the website.

Disability Support: Any student with a documented disability seeking academic adjustments or accommodations is requested to speak with me during the first two weeks of class. All such discussions will remain as confidential as possible. Students with disabilities will need to also contact Disability Support Services in the Allen Center